Collaborative Learning Assignment
FRACTIONS

Just State the Facts

Everyone knows that $2 + 2 = 4$ and also $2 \times 2 = 4$. But, did you know there are many pairs of numbers with sum and product equal? For example,

$$3\frac{1}{2} + 1\frac{2}{5} = 4\frac{9}{10} \text{ and } 3\frac{1}{2} \times 1\frac{2}{5} = 4\frac{9}{10}.$$

Everyone knows that New York City is in the state of New York. But, did you know there are many cities with a state’s name that are in a different state? For example, there is a city named Indiana in the state of Pennsylvania.

* For the brave

1. Beside each city and each state is a number. If you think you know a city and its state, first add the two given numbers, then multiply those same two numbers. If the sum and product are equal, then the city is in that state.

For example, if you think the city of California is in the state of Pennsylvania, first add

$$\frac{3}{5} + \frac{2}{3} = \frac{4}{15}$$

then multiply

$$\frac{3}{5} \times \frac{2}{3} = \frac{4}{15}.$$

The sum is $\frac{4}{15}$, and so is the product. This means that California is in Pennsylvania.

Now pair off the other ten cities with their states in the same way.

CITIES

California $\frac{3}{5}$ Nevada $\frac{1}{2}$
Delaware $\frac{5}{6}$ Oregon $\frac{1}{4}$
Iowa $\frac{1}{5}$ Virginia $\frac{2}{3}$
Louisiana $\frac{4}{5}$ Washington $\frac{3}{10}$
Maine $\frac{5}{8}$ Wyoming $\frac{3}{4}$
Michigan $\frac{1}{3}$

STATES

Arkansas $\frac{1}{5}$ New York $\frac{2}{5}$
Georgia $\frac{4}{3}$ North Dakota 4
Iowa 3 Pennsylvania $\frac{2}{3}$
Louisiana 6 Rhode Island $\frac{2}{3}$
Minnesota $\frac{1}{2}$ Wisconsin 5
Missouri $\frac{1}{4}$